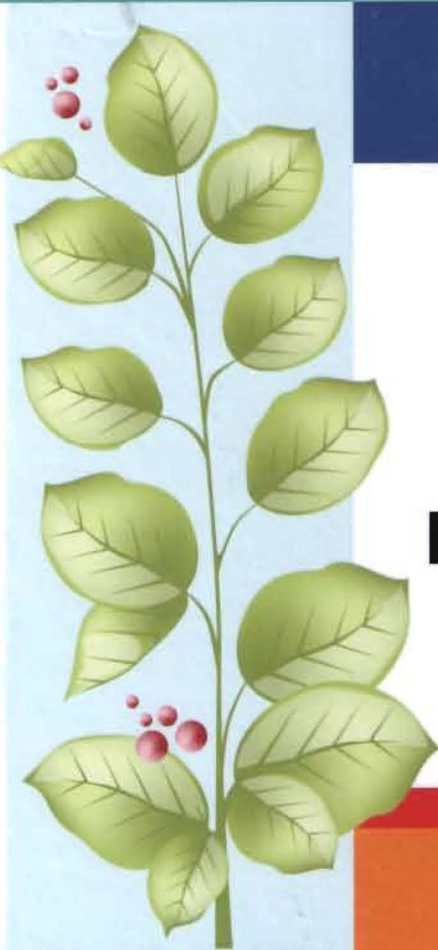




RESEARCH REPORT

A Model for the Development and Promotion of the Use of Herbal Medicines in Thai Households



A Joint Study between

The Department of Health Service Support and

The Department of Thai Traditional and Alternative Medicine,

Ministry of Public Health,

with technical collaboration from

The Faculty of Medicine, Thammasat University, Thailand



ABSTRACT

This quasi-experimental study aims to develop a model for the promotion of the use of traditional Thai herbal medicines as household remedies and to support the rational use of herbal medicine in Thailand. The herbal medicines selected in the study are listed in the National List of Essential Medicines or are on common drug lists and are widely used in hospitals in Thailand. A specific stratified sampling method was applied to the study. The locations selected for this study were provinces that represent each of the four parts of Thailand, namely Chiang Rai in the North, Si Sa Ket in the Northeast, Surat Thani in the South and Suphan Buri in the central region. For each province selected, target communities were chosen to represent three specific communities: urban, suburban and rural communities located within 10 km, 10-30 km and more than 30 km of a hospital, respectively. Each community consisted of not fewer than one hundred enrolled families and had one village health volunteer for every ten to fifteen families. The research was performed by implementing different primary health care strategies. The evaluation of the study was based on both quantitative and qualitative methods using questionnaires, in-depth interviews and focus group discussions. The research was divided into three phases. **Phase 1** featured a survey of the general demographic data of enrolled subjects, their health problems, and health care seeking behavior. The data also included the approximate household income and the amount spent on medication or healthcare during the three months prior to being enrolled on this study. **Phase 2** focused on the attitudes, behavior and knowledge of subjects with regard to the use of herbal medicines before and after the training program. **Phase 3** consisted of a similar survey to Phase 2, except that the data was evaluated six months into the project. Data analysis was performed in terms of percentages and correlations between different study population subgroups were analyzed by F-test. A qualitative research study was conducted three months after the project had been initiated and included in-depth interviews and focus group discussions among the participants and village health volunteers. Three participants were selected from each community to assist with the descriptive research study. This aimed to identify obstacles or difficulties that had occurred during the study and to monitor the progress of the project and collect other data, including records of illness, the efficacy of herbal medicines used, side effects and so on.

The data survey three months before the start of the project revealed a total of 1,390 families enrolled in the study. The distribution of families living in urban,

suburban, and rural communities was almost equal, with the proportions of these three groups ranging from 31.51% to 34.68% of the total.

Representatives of the families who participated in the study were 67.60% female. Among these female participants, 57.79% had given birth. Most of the participants were aged 40-49 years old (30.37%), followed by 50-59 years old (23.31%). Families typically contained 1 to 3 members (43.62%). Most of the participants were Buddhists (98.84%) and they were mostly married (75.87%). Most participants had completed primary school (69.20%) and occupations were most often in agriculture (49.71%). As regards annual income, for 44.82% of participants, the total family revenue was greater than 30,000 baht a year. 38.13% of participants lived fewer than 5 km from a hospital, whereas 29.94% live more than 30 km from a hospital. Total traveling time to the nearest hospital was fewer than 10 minutes for 25.87% and between 10 and 20 minutes for another 26.24%. Motorcycles were the most common means of transportation (54.89%). 69.98% of participants' houses were located fewer than 4 km from a health center and among these, for 38.78%, the journey to the center took fewer than 10 minutes. Similarly, motorcycle was mostly used for transportation (70.78%). High blood pressure was the most common chronic disease observed in participants (68.28%) followed by diabetes (35.59%).

Reported health problems and drug use behaviors of participants who lived in urban, suburban and rural communities revealed that having a headache was the health problem that was most often presented (70.16%), followed by fever and running noses at 48.26% and 31.17%, respectively. The data also showed that paracetamol and other pain killing drugs were most often used. The cost of a single course of medication was most often less than 100 baht (82.45%).

In the three months prior to being enrolled in the study, 28.81% of participants used herbal medicine to relieve muscular pains or aches. Other uses of herbal medicine included maintaining health and relief of joint and bone pain, 27.97% and 24.86% respectively. This was found to occur most often in rural communities.

73.27% of participants spent less than 100 baht per treatment for herbal medicine. Knowledge and guidance in using herbal medicine mostly came from senior relatives (44.82%).

Various types of herbal medicines were used to relieve illness. Lemongrass or *Cymbopogon citratus* (DC.) was the most regularly used herbal drugs (20.43%), followed by Ginger or *Zingiber officinale* Roscoe and Galanga or *Alpinia galanga* Swartz, at rates of 16.98% and 13.38%, respectively. Illness and symptoms leading to the use of herbal

medicines were: 19.06% digestive problems, 12.66% fever or the common cold and 8.06% common skin diseases such as allergic dermatitis, insect bites, minor burns, and bruises.

Between 59 and 99% of participants requested continued use of herbal medicines as household remedies, the major demand of which was to relieve headaches (99.35%), to relieve bodily or muscular pain (84.17%) and to relieve joint and bone pain (83.24%).

Attitudes toward type of medication were also investigated. 46.04% thought that western medicines are the most effective form of treatment and 44.10% thought that western medicine worked faster than herbal medicine. 38.49% of the participants agreed that western medicine could be harmful to health if used in the long term. The surveys also indicated that 43.96% and 58.42% of the participants agreed that herbal medicine was safe and was suitable for use by all members of the family, including, respectively, children and the aged. 53.53% of participants agreed that herbal medicine needs longer term treatment to yield its expected result. 54.24% of participants agreed that using herbal medicine would reduce medication expenditure. 59.71% of participants thought that herbal medicines should be produced in forms that could be stored for long periods of time and 58.49% suggested that they should be manufactured in forms and doses which were as convenient to use as western drugs.

Information on illness and expenditure on medication for all participants was recorded over eleven months, from March 2009 to January 2010. There was an average of 8 episodes of illness in these communities per household per year. The data also indicated that cases of illness were most commonly found in June (12.7%). In addition, 66.3% of recorded illness occurred in female participants. The highest rate of illness was observed in participants aged 50 years and over, followed by those 31-50 years old. Commonly found symptoms included body or muscle pains as well as cough and indigestion. 92.3% of those illnesses and symptoms were managed by using the herbal medicine provided under this project. The data indicated that the most popular herbal medicines were *ma kam pom*, an anti-cough medication, (15.15%), *ya tat op chey*, a digestive aid, (10.13%) and *ya sa-hut thara*, for relieving body and muscle aches, (9.93%). This information was also closely correlated to records kept by village health volunteers of the total amount of herbal medicine consumed.

With respect to the efficacy of the herbal medicines, in 45.52% of cases in which herbal medicines supplied by this project were used, patients were reported fully cured, and 47.17% of cases were reported improved. In 63.42% of illnesses, participants

recovered after 1-3 days of treatment. There were only 23 cases where the participants did not recover and had to travel to receive treatment from a professional.

All together, 100% of the participants approved of the overall design of the research protocols. 85.0% of participants appreciated the project processes, the medications supplied, the support from the village health volunteer and local health staff, the knowledge which they gained and the evaluation methods used.

The overwhelming majority of participants (90.0%) also appreciated the types and forms of herbal medicine supplied, which were found to meet common health needs and to be effective and convenient to use. Most participants had no problem meeting the cost of the herbal medicines used in their household. At the end of the project, 96.1% of participants stated that they would continue to maintain supplies of these herbal medicines to be used as household remedies.

The results suggested that the use of herbal medicine can reduce expenditure on medication. The overall cost of traditional medicines was a quarter that of western medicines typically used for the treatment of the same common illnesses.

In conclusion, this research study strongly showed that, with an effective system of self-care support, herbal medicines can be effectively and rationally used as household remedies for common illnesses. They are effective and safe. Public confidence and acceptability are high in all communities and among different socioeconomic classes. The whole process of production and supply of traditional medicines encourages self-reliance and could reduce expenditure on the importation of western medicines. Further study is required, however, to improve the whole herbal medicine supply chain, including product quality and social marketing systems.